

PRECIPITATION.

The general distribution of the rain-fall, including melted snow, for the month, is illustrated upon chart No. III, as accurately as possible from about 500 reports. This chart shows the area of maximum precipitation over western Tennessee, and areas of minimum precipitation over the Eastern Slope of the Rocky Mountains and in the Red river of the North valley. In the left-hand corner of the same chart will be found a table of average rain-falls for the month of February, which shows large excesses for the present month over the region of heaviest rain-fall and in the St. Lawrence valley. An excess of about one inch is also found in the Lake region and Florida. In the Middle and South Atlantic and Eastern Gulf States and to the west of the Mississippi valley, deficiencies occur, which are found to be largest on the Pacific coast.

Special Heavy Rains.—1st, New Ulm, Tex., 2.06 in.; San Antonio, Tex., 2.05 in. 1st and 2nd, Mesquite, Tex., 5.00 in.; Melissa, Tex., 2.90 in.; Brookhaven, Miss., 2.50 in.; Shreveport, La., 3.30 in.; White Plains, N. Y., 3.85 in.; Fort Barrancas, Fla., 2.61 in. 2nd, Mobile, 2.80 in. 2nd and 2rd, Cape Lookout, N. C., 2.91 in.; 3rd, Penn Yan, N. Y., 2.86 in. 9th, Mayport, Fla., 3.11 in. 11th to 13th, Austin, Tenn., 6.25 in.; Memphis, Tenn., 6.14 in.; Nashville, Tenn., 8.02 in.; Laconia, Ind., 3.34 in.; Highlands, N. C., 3.15 in. 13th, Helvetia, W. Va., 2.09 in. in 30 hours. 19th, Santa Barbara, Cal., 9.93 inches in 46 hours. 19th and 20th, Lompoc, Cal., 4.40 in. 27th, Melissa, Tex., 3.00; Clarksville, Tex., 3.75 in. 27th and 28th, Little Rock, Ark., 5.24 in.; Mount Ida, Ark., 3.00 in. 28th and 29th, Mesquite, Tex., 5.00 in.; New Ulm, Tex., 2.44 in.

Largest Monthly Rainfalls, including Melted Snow.—Nashville, Tenn., 12.37 inches; Mesquite Tex., 10.75 in.; Austin, Tenn., 9.89 in.; Memphis, 9.44 in.; Little Rock, Ark., 7.95 in.; McMinnville, Tenn., 7.65 in.; New Ulm, Tex., and College Hill, Ohio, 7.50 in.; Cedar Keys, Fla., 7.35 in.; Cape Hatteras, N. C., and White Plains, N. Y., 7.13 in.; St. Augustine, Fla., 6.91 in.; Brookhaven, Miss., 6.50 in.; Melissa, Tex., 6.40 in.; Mayport, Fla., 6.39 in.; Laconia, Ind., and Shreveport, La., 6.19 in.; Lompoc, Cal., 6.18 in.; Jacksonville, 6.17 in.; Montgomery, 6.11 in.; Ashwood, Tenn., 6.10 in.; Clarksville, Tex., 6.00 in.; Ft. Barrancas, Fla., 5.78 in.; Cape Lookout, N. C., 5.77 in.; Mobile, 5.73 in.; Mt. Ida, Ark., 5.70 in.; Portland, Or., 5.67 in.; Highlands, N. C., and Margaretta, Ohio, 5.55 in.

Smallest Monthly Rain-falls, including Melted Snow.—India, Cal., Ft. Lyon, Col., Stockton, Texas and Breckenridge, none; Ft. Wallace and Dodge City, Kan., Ft. McPherson, Nebr., Yuma, Ariz., and El Paso, Tex., trace; Pilot Point, Tex., 0.01 in.; Ft. Hartsuff, Nebr., 0.02 in.; Socorro, N. M. and North Platte, 0.03 in.; Ft. Elliott, Tex., and Manhattan, Kan., 0.05 in.; Cheyenne, W. T., 0.09 in.; De Soto and Howard, Nebr., and Ft. Verde, Ariz., 0.13 in.; Ft. Sidney and Omaha, Nebr., 0.14 in.; Vail, Ia., and Tucson Ariz., 0.15 in.; Prescott, Ariz., 0.26 in.; Des Moines, Ia., 0.17 in.; Glenwood, Ia., and Plattsmouth, Nebr., 0.18 in.; Pembina, Dak., 0.20 in.; Wickenburg, Ariz., 0.25 in.; Ft. Garland and Denver, Col., 0.32 in.; Corning, Mo., 0.35 in.; Ft. Fred Steele, W. T., and Phoenix, Ariz., 0.38 in.; Nora Springs, Ia., 0.40 in.; Camp Sheridan, Nebr., 0.42 in.; Lawrence and Wellington, Kan., and La Mesilla, N. M., 0.43 in.; Camp Grant, Ariz., 0.48 in.; Florence, Ariz., 0.49 in.; Genoa, Nebr., and Holton, Kan., 0.50 in.

Rainy Days.—The number of days on which rain or snow has fallen, varies as follows: New England, 12 to 23; Middle Atlantic States, 6 to 13; South Atlantic States, 7 to 12; Eastern Gulf States, 4 to 13; Western Gulf States, 8 to 16; Lower Lake region, 15 to 25; Upper Lake region, 8 to 20; Ohio valley and Tennessee, 9 to 17; Upper Mississippi valley, 7 to 11; Missouri valley, 2 to 5; Red River of the North valley, 0 to 9; Eastern Rocky Mountain Slope, 1 to 12; Texas, 1 to 16; Rocky Mountains, 2 to 7; Middle Plateau, 9 to 13; California, 8 to 10; Oregon, 14 to 18.

Cloudy Days.—The number varies in New England from 5 to 16; Middle Atlantic States, 5 to 12; South Atlantic States, 4 to 13; Eastern Gulf States, 3 to 15; Western Gulf States, 10 to 20; Lower Lake region, 9 to 16; Upper Lake region, 11 to 15; Ohio valley and Tennessee, 8 to 13; Upper Mississippi valley, 1 to 8; Missouri valley, 2 to 4; Red River of the North valley, 6 to 9; Eastern Rocky Mountain Slope, 4 to 7; Texas, 0 to 19; Rocky Mountains, 3 to 7; Middle Plateau, 9 to 12; California, 5 to 9.

Hail was reported from the various stations as follows: Lompoc, Cal., 22nd; Elmira, Ill., 24th; Mt. Sterling, Ill., 20th; Ft. Madison, Ia., 24th; Yates Centre, Kan., 18th; Kansas City, Mo., 25th; Ashley, Mo., 20th, 28th; Fort Sill, Ind. Ty., 12th; Henrietta, Tex., 28th; Coleman and Fort Concho, Tex., 1st; Denison, Tex., 12th; La Crosse, Wis., 28th; Duluth, 11th.

Snow fell on the following dates in the various districts:—New England, 1st to 17th, 19th, 21st to 24th; Middle Atlantic States, 1st, 2nd, 3rd, 4th, 5th, 7th, 8th, 9th, 10th, 11th, 13th, 14th, 15th, 18th, 19th, 21st, 28th; North Carolina, 2nd, 3rd, 6th, 20th, 21st; Georgia, 2nd, 5th, 6th, at Gainesville snow fell to the depth of two inches on the 2nd; Lower Lake region, 1st to 10th, 13th to 16th, 18th to 23rd, 29th; Upper Lake region, 1st to 16th, 18th to 29th; Ohio valley, 1st to 7th, 9th, 13th, 14th, 15th, 18th 19th to 23rd 29th; Tennessee, 2nd, 3rd; Mississippi, Louisiana and Arkansas, 2nd; Upper Mississippi valley, 1st to 7th, 13th, 14th, 17th, 18th, 20th, 25th, 26th, 28th, 29th; Texas and Indian Territory, 1st, 2nd, 3rd, 4th, 12th, 13th, 14th, 29th. Missouri valley, 1st, 2nd, 3rd, 4th, 6th, 7th, 8th, 9th, 11th, 12th, 13th, 15th, 16th 22nd, 24th to 28th. Rocky Mountains, 1st to 6th, 10th, 11th to 19th 22nd to 29th. Middle Plateau, 2nd, 3rd, 9th, 10th, 13th, 15th, 16th, 18th, 19th, 21st to 29th. California, 11th, snow on summit of Mt. Diablo and along the Coast Range southeast of San Francisco; 22nd, snow storm prevailed on summit of San

Pablo; 23rd, snow on Coast Range. Oregon, 10th, 14th to 19th. Washington Territory, 12th, 13th, 14th, 16th, 17th, 18th.

Largest Monthly Snow-falls.—Emigrant Gap, Cal., 98.75 inches; Summit, Cal., 75.00 in.; Cisco, Cal., 71.00 in.; Alta, Cal., 49.00 in.; Colfax, Cal., 48.00 in.; Truckee, Nev., 46.50 in.; Surry, Me., 34.00 in.; Boca, Nev., 30.00 in.; Little Mountain, Ohio, 29.50 in.; Ogden, Utah, 25.50 in.; Palermo, N. Y., 25.00 in.; Coalville, Utah, 24.50 in.; Lunenburg, Vt., and Penn Yan, N. Y., 23.50 in.; Nile, N. Y. and Newport, Vt., 23.00 in.; Mt. Washington, 21.60 in.; Cleveland, Ohio, 21.50 in.; New Corydon, Ind., 20.10 in.; Cornish, Me., and Stafford, Vt., 20.00 in.; Grafton, N. H., 19.50 in.; Rowe, Mass., 19.00 in.; Lima, N. Y., 18.50 in.; Clinton, Mass., 18.00 in.; Gardiner, Me., 17.75 in.; Woodstock, Vt., 16.70 in.; Norwalk, Ohio, 16.58 in.; Orono, Me., 16.50 in.; Helvetia, W. Va., 16.25 in.; Dunbarton, N. H., and Carson City, Nev., 16.00 in.; Duluth, Mich., 15.50 in.; Waterburg, N. Y., 15.40 in.; Hermosa, Col., 15.30 in.; Auburn, N. H., and Alpena, Mich., 15.00 in.; Amherst, Mass., and Litchfield, Pa., 14.50 in.; Westborough, Mass., 14.00 in.; Antrim, N. H., 13.50 in.; Paterson, N. J., 13.25 in.; Hudson, Ohio, New Bedford, Mass., and Tehachapi, Cal., 13.00 in.; Ithaca, N. Y., 12.60 in.; Starkey, N. Y., 12.50 in.; Ruggles, Ohio, 12.00 in.; Wellsboro, Pa., 11.80 in.; Waltham, Mass., 11.50 in.; Northport, Mich., 11.30 in.; Lewisburg, Ohio, 11.30 in.; Ft. Collins, Col., 10.50 in.; Morristown, Dak., Minneapolis, Minn., New Castle, and Dyberry, Pa., Embarrass, Wis., Ardenia, White Plains and Hector, N. Y., and Keene, Cal., 10.00 in.

Snow from a cloudless sky.—Colorado Springs, 4th; Coleman, Tex., 14th; Detroit, Mich., 7th; Springfield, Mass., 5th; Starkey, N. Y., 19th.

The depth of snow on ground at end of month was reported as follows: In Maine, trace to 6 inches; New Hampshire, 0 to 12 in.; Vermont, 2 to 6 in.; Massachusetts, New York and Pennsylvania, trace; lower Michigan, trace to 1 in.; upper Michigan, 2 to 12 in.; Wisconsin, trace to 4 in.; Minnesota, 2 to 6 in.; Iowa, $\frac{1}{2}$ to 2 $\frac{1}{2}$ in.; Nebraska, trace to 2 in.; Dakota, 1 to 10 in.; Colorado, 1 to 20 in. at Hermosa; Wyoming Territory, trace to 3 in.; Montana, 1 inch at Virginia City; Utah, $\frac{1}{2}$ to 6 in.; Nevada, trace at Winnemucca.

Floods.—Mesquite, Tex., 28th and 29th, heavy rain-storm, fields badly washed, corn-fields considerably damaged. New Orleans, 2nd, high water broke the levee seven miles below the city; 7th, another break from 150 to 200 feet wide was reported at Kennerville, La. Louisville, 17th, river rose rapidly, flooding the lower floor of houses on Seventh and Water streets. Memphis, 11th, 12th, very heavy rain-storm, cellars flooded gas extinguished and eight bridges across Gayoso Bayou injured or destroyed; city sewers and crossings badly injured; Wolfe river rose rapidly carrying away \$5,400 worth of logs; all trains on roads leading into the city were delayed. Albany, N. Y., 14th, sudden rise in the river, flooding cellars on Quay street, also at foot of Broadway and Maiden Lane, causing considerable damage.

Precipitation during January, received after issue of January Review.—Arizona: Whipple Barracks, 0.41 inches; Ft. Lowell, 0.62; Ft. Verde, 1.08; Ft. Apache, 1.24; Ft. Grant, 0.65. California: Benicia Barracks, 1.32; Angel Islands, 2.56; Ft. Yuma, trace; Ft. Gaston, 8.45; Ft. Bidwell, 3.10; Oakland, 1.71; Poway, 1.13; San Geronima, 1.78; San Buenaventura, 1.41; Campo, 3.00. Dakota: Ft. Sisseton, 0.30; Ft. Sully, 0.00; Ft. Totten, 0.40; Ft. Meade, 0.38. Idaho: Ft. Lapwai, 0.92; Ft. Cœur d'Alene, 3.74; Lewiston, 0.34. Michigan: Ft. Brady, 2.40; Petoskey, 1.53; Ypsilanti, 2.05. Montana: Ft. Benton, 0.24; Ft. Shaw, 0.10; Ft. Ellis, 0.87; Ft. Keogh, 0.14; Ft. Logan, 0.15; Ft. Assiniboine, 0.10; Blackfeet Agency, 0.48. Oregon: Ft. Stevens, 28.94; Ft. Klamath, 2.34; Ft. Harney, 0.56; Eola, 7.92; Albany, 11.19. Texas: Ft. Ringgold, 0.22; Ft. Brown, 3.13; Ft. Davis, 1.68; Coleman, 2.03; Edinburg, 1.48; Brownsville, 3.87. Washington Territory: Ft. Colville, 2.07; Ft. Canby, 22.28; Ft. Townsend, 3.40; Neah Bay, 25.70; Bainbridge Island, 17.62; Dayton, 3.37. Florida: Biscayne, 3.80; Okahumpka, 4.25; Daytona, 3.68; Orlando, 6.01. Massachusetts: New Bedford, 1.86; Williamstown, 3.39. Missouri: Oregon, 1.59. New Jersey: Dodge Mine, 2.36; Deckertown, 1.94. New York: Port Jervis, 2.65. Nevada: Carson City, 1.00. North Carolina: Sulphur Springs, 2.00. Minnesota: Breckenridge, 0.01.

RELATIVE HUMIDITY.

The percentages of mean relative humidity for the month range as follows: New England, 68 to 75; Middle Atlantic States, 60 to 77; South Atlantic States, 58 to 80; Eastern Gulf States, 68 to 79; Western Gulf States, 62 to 78; Ohio valley and Tennessee, 60 to 71; Lower Lake region, 68 to 75; Upper Lake region, 62 to 77; Upper Mississippi valley, 59 to 71; Missouri valley, 48 to 63; Red River of the North valley, 90 to 95; Eastern Rocky Mountain Slopes, 48 to 56; Texas, 26 at Stockton to 79 at Edinburg; Western Plateau, 36 at Yuma to 69 at Boise City; California, 53 to 72; Oregon, 79 to 83. *High stations* report the following averages not corrected for altitude: Virginia City, 57; Cheyenne and Denver, 51; Santa Fe, 47; Mt. Washington, 87.

WINDS.

The prevailing directions of the wind are shown by arrows flying with the wind, on chart No. II. On the coast of North Carolina, in Florida and thence along the Gulf coast to New Orleans they are *northwesterly*, but elsewhere south and east of Nebraska, Iowa and Wisconsin, they are *southerly* inclining to *westerly* in the Lake region and along the East and Middle Atlantic coasts. Along the south coast of New England, at Baltimore, Augusta, Atlanta, and from Nebraska northward, they are *northwesterly*.